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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/020,255      | 12/14/2001  | Tong Zhang           | 10018002-1          | 8721             |

7590 12/18/2006  
HEWLETT-PACKARD COMPANY  
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| EXAMINER |
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DUNN, MISHAWN N

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2621

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|----------------------------------------|------------|---------------|
| 3 MONTHS                               | 12/18/2006 | PAPER         |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/020,255 | <b>Applicant(s)</b><br>ZHANG, TONG |  |
|                              | <b>Examiner</b><br>Mishawn N. Dunn   | <b>Art Unit</b><br>2621            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 16-18, 21-24, 26-29, 30-32, and 34-36 is/are rejected.
- 7) ☒ Claim(s) 14, 15, 19, 20, 25, and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                |                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                           | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/01</u> . | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION*****Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1, 7-11, 16-18, 28, and 29 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 7-16, 27, and 29-31 of copending Application No. 10/020,256. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application are substantially the same as that of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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2. Application claims 1 and 11, respectively, recite all as recited in copending application claims 1 and 11. Application claim 7 recites all as recited in copending application claims 7 and 27, but the application claim further recites the "start or stop of music," therefore are deemed narrower than the copending claims. Application claims 8-10 and 16-18, respectively, recite all as recited in copending application claims 8-10 and 12-14. Application claim 28 recites all as recited in copending application claims 3, 16, and 31, but the application claim further recites "delimiting video segments corresponding to said semantically meaningful video scenes... at a beginning of said semantically meaningful video scenes," therefore are deemed narrower than the copending claims. Application claims 29 and 36, respectively, recite all as recited in copending application claims 2, 15, and 30, but the application claims further recite "delimiting video segments corresponding to said semantically meaningful video scenes," therefore are deemed narrower than the copending claims. Application claim 35 recites all as recited in copending application claim 29. While all the claims in '256 are not identical to the claims in '255, the scope of the '255 claims are encompassed by the '256 claims, and could have been submitted in that application. Hence, the obviousness double patenting rejection is deemed appropriate.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 11, 21, 22, 27, 28, 29, 30, 35, and 36 are rejected under 35

U.S.C. 102(b) as being anticipated by Blanchard (US Pat. No. 6,347,114).

5. Consider claim 1. Blanchard teaches a video processing device, comprising: a background audio change detecting means for detecting background audio changes in video data; and a memory communicating with said background audio change detecting means and storing said video data and audio data corresponding to said video data; wherein said background audio change detecting means detects a background audio change in said audio data and detects semantically meaningful video scenes using detected background audio changes (col. 4, lines 11-51).

6. Consider claim 2. Blanchard teaches the device of claim 1, wherein said background audio change detecting means further delimits segments of said video data (col. 4, lines 11-51).

7. Consider claim 3. Blanchard teaches the device of claim 1, wherein said background audio change detecting means further determines if said audio data comprises background audio (abstract; col. 2, lines 15-16).

8. Consider claim 11. Blanchard teaches a video processing device, comprising: a processor (col. 2, lines 63-67); a background audio change detector communicating with said processor; and a memory communicating with said processor, said memory storing video data and audio data corresponding to said video data; wherein said background audio change detector detects a background audio change in said audio

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data and wherein said processor detects semantically meaningful video scenes using detected background audio changes and delimits segments of said video data (col. 4, lines 11-51).

9. Consider claim 28. Blanchard teaches the method of claim 21, further comprising the step of delimiting video segments corresponding to said semantically meaningful video scenes by inserting indexes into said video data at a beginning of said semantically meaningful video scenes (col. 4, lines 43-51).

10. Consider claim 29. Blanchard teaches the method of claim 21, further comprising the step of delimiting video segments corresponding to said semantically meaningful video scenes by extracting and storing one or more representative video frames from each video segment (col. 4, line 60 – col. 5, line 8; fig. 3).

11. Claims 21, 22, 27, 30, 35, and 36 are rejected for the same reasons as discussed in the corresponding claims above.

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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13. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blanchard (US Pat. No. 6,347,114) in view of Ohta et al. (US Pat. No. 6,449,021).

14. Consider claim 4. Blanchard teaches all the claimed limitations as stated above, except that said background audio change comprises an audio blank.

However, Ohta et al. discloses audio change comprising an audio blank (abstract; col. 6, lines 5-9).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to detect an audio blank when evaluating the background audio change, in order to detect commercials.

15. Claims 5, 6, 8, 12, 13, 16, 23, 24, 26, 31, 32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanchard (US Pat. No. 6,347,114) in view of Nonomura et al. (US Pat. No. 6,094,234).

16. Consider claim 5. Blanchard teaches all the claimed limitations as stated above, except that said background audio change comprises an audio volume change.

However, Nonomura et al. discloses audio change comprising an audio volume change (col. 11, lines 54-56; col. 14, lines 1-4; fig. 19).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to detect a volume change when evaluating the background audio change, in order to detect a scene change.

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17. Consider claim 6. Blanchard teaches all the claimed limitations as stated above, except that said background audio change comprises an audio frequency content change.

However, Nonomura et al. discloses audio change comprising an audio frequency content change (col. 14, lines 4-7; fig. 20).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to detect a frequency content change when evaluating the background audio change, in order to detect a scene change.

18. Consider claim 8. Blanchard teaches all the claimed limitations as stated above, except that said video processing device comprises a video recorder device.

However, Nonomura et al. discloses a video recorder device (col. 11, lines 1-15; fig. 27).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to use a video recorder device, in order to record the scene change information.

19. Consider claim 12. Blanchard teaches all the claimed limitations as stated above, except that said memory stores a predetermined audio volume change threshold and wherein said background audio change detector comprises an audio volume detector, and wherein said audio volume detector generates an audio volume change value and detects a background audio change when said audio volume change value exceeds said predetermined audio volume change threshold.

However, Nonomura et al. discloses storing a predetermined audio volume change threshold and wherein said background audio change detector comprises an audio volume detector, and wherein said audio volume detector generates an audio volume change value and detects a background audio change when said audio volume change value exceeds said predetermined audio volume change threshold. (col. 11, lines 54-56; col. 14, lines 1-4; fig. 19).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to store a predetermined audio volume change threshold, in order to detect a scene change based on audio volume change.

20. Consider claim 13. Blanchard teaches all the claimed limitations as stated above, except that said memory stores a predetermined audio frequency change threshold and wherein said background audio change detector comprises a frequency change detector, and wherein said frequency change detector generates a frequency change value and detects a background audio change when said frequency change value exceeds said predetermined audio frequency change threshold.

However, Nonomura et al. discloses storing a predetermined audio frequency change threshold and wherein said background audio change detector comprises a frequency change detector, and wherein said frequency change detector generates a frequency change value and detects a background audio change when said frequency change value exceeds said predetermined audio frequency change threshold (col. 14, lines 4-7; fig. 20).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to store a predetermined audio frequency change threshold, in order to detect a scene change based on audio frequency change.

21. Consider claim 26. Blanchard teaches all the claimed limitations as stated above, except that with the step of detecting background audio changes further comprising the steps of: generating a frequency data from said audio data; detecting substantially stable frequency peaks in said frequency data; and detecting a background audio change at a start or stop of said substantially stable frequency peaks.

However, Nonomura et al. discloses the step of detecting background audio changes further comprising the steps of: generating a frequency data from said audio data; detecting substantially stable frequency peaks in said frequency data; and detecting a background audio change at a start or stop of said substantially stable frequency peaks (col. 14, lines 4-7; fig. 20).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to detect substantially stable frequency peaks in said frequency data, in order to detect scene change based on frequency change.

22. Claims 16, 23, 24, 31, 32, and 34 are rejected for the same reasons as discussed in the corresponding claims above.

23. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blanchard (US Pat. No. 6,347,114) in view of Ellis et al. (US Pub. No. 2005/0020223).

24. Consider claim 7. Blanchard teaches all the claimed limitations as stated above, except that said background audio change comprises a start or stop of music.

However, Ellis et al. discloses an audio change comprising the stop of music (pg. 42, para. 0515).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to detect the start or stop of music, in order to automatically determine the start or end point of some content.

25. Claims 9, 10, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanchard (US Pat. No. 6,347,114) in view of Setogawa et al. (US Pat. No. 5,822,024).

26. Consider claim 9. Blanchard teaches all the claimed limitations as stated above, except that said video processing device comprises a video editor device.

However, Setogawa et al. discloses a video editor device (col. 7, lines 54-67; fig. 7).

Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to provide a video editor device, in order to edit the recorded data.

27. Consider claim 10. Blanchard teaches all the claimed limitations as stated above, except that said video processing device comprises a video authoring device.

However, Setogawa et al. discloses a video authoring device (col. 7, line 54 – col. 8, line 15; fig. 8).

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Therefore, it would have been obvious to one with ordinary skill in the art, at the time the invention was made to use, to provide a video authoring device, in order to create hypertext content.

28. Claims 17 and 18 are rejected for the same reasons as discussed in the corresponding claims above.

***Allowable Subject Matter***

29. Claims 14, 15, 19, 20, 25, and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. US Pat. No. 6,973,256
- b. US Pat. No. 6,163,510
- c. US Pat. No. 5,828,809

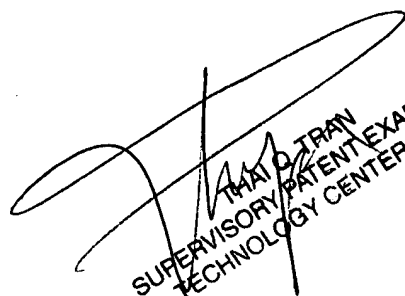
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mishawn N. Dunn whose telephone number is 571-272-7635. The examiner can normally be reached on Monday - Friday 7:30 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mishawn Dunn  
December 1, 2006

  
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